



PHOTOGRAPHY FAQ

Q What exactly are the advantages of the different battery options for digital cameras?

A Battery life is an important issue with digital cameras, as today's high-capacity memory cards and large LCD screens mean you're much more likely to run out of power than storage space. Most people prefer lithium-ion (li-ion) to standard AA batteries, but both types have their strengths and weaknesses.

One simple advantage of choosing a camera with a li-ion battery is that the battery and a charger are supplied as part of the package. As they are designed to fit specific cameras, they also allow more compact camera designs. Casio's EX-S500, which we reviewed in *What's New, Shopper* January 2006, is thinner than an AA battery at just 13.7mm from front to back.

Li-ion batteries aren't cheap to produce, though, so cameras that use them tend to cost more. Spares are also expensive. If you don't want to risk running out of power halfway through the day, a spare li-ion battery will set you back £15 to £40, depending on the camera model. Buying a spare doesn't always make sense, though. Charging cradles and on-camera power sockets make it easy to charge a single battery but impossible to charge one while using another. This is why pricier cameras tend to have external chargers for their li-ion batteries.

Cameras that use AA batteries are nearly always supplied with disposable alkaline cells, which usually give only a couple of days' use. Therefore, rechargeable cells are an essential upgrade. Nickel metal hydride (NiMH) batteries have the highest capacity, but these vary from 750 to 2,600mAh per battery. Four high-capacity cells and a fast charger will set you back around £25. This may be more expensive and less elegant than the li-ion battery that comes with the camera, but the combined capacity of four 2,300mAh cells will keep your camera going much longer than a single li-ion cell, which typically ranges from 700 to 2,000mAh. It's also easy and reasonably cheap to buy disposable AA batteries in an emergency, or when venturing far from a mains socket.

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▲ You can buy batteries for cameras that take AA cells, but high-power rechargeables are better

REVIEW DIGITAL CAMERA

CASIO Exilim Zoom EX-Z120

RATING ★★★★★

PRICE £152 inc VAT

SUPPLIER www.pixmania.co.uk

DETAILS www.casio.co.uk

As compact digital cameras go, the Exilim Zoom EX-Z120's vital statistics are close to perfect. It captures 7.2-megapixel stills and VGA-resolution video, it's compact enough to slip into a trouser pocket, and it includes priority and manual modes, all for a startlingly low £152.

There are a few compromises: the 8.7MB internal memory holds only two shots at the top-quality setting, so an SD card is an essential purchase, as are rechargeable AA batteries. The 2" screen's 85,000-pixel resolution is below average, although an optical viewfinder provides more detail if you need it. Transfers to the PC are slow at 1MB/s, and a card reader isn't much help as removing cards from the SD slot is tricky.

Operation is straightforward and fast: the Z120 starts up in two seconds and is ready in just over a second between shots thanks in part to a quick auto-focus. With a fast SD card the continuous mode managed a sustained 1.1fps, superb for a camera at this price. Aperture control is limited to two settings (f/2.8 and f/4 at wide-angle zoom) and in manual exposure mode the screen's brightness reacts to settings only when the shutter is half pressed rather than continuously. Creative types will like the 60-second maximum exposure time.



The Z120 has an unusual technique for dealing with low lighting conditions. ISO settings of 50 to 400 can be selected, but in Auto ISO the camera uses settings as high as 1,600 to capture well-exposed shots without resorting to blur-inducing long shutter times. Indoor photography is grainy as a result, though you can remedy this by using manual ISO settings and a steady hand. Otherwise, image quality is consistently above average, with reasonable detail and excellent automatic exposure and white balance, although colours can be a little undersaturated.

Image quality is decent rather than exceptional, but this well-conceived package doesn't disappoint.

Ben Pitt



Low price; fast operation



Excessive image noise in Auto mode

SPECIFICATIONS 7.2 megapixels (3,072x2,304 pixels), 3x optical zoom, 8.7MB internal memory, SD slot, 2x AA batteries (disposable alkaline supplied). **Part code** B00DAYDQNO

HOTLIST DIGITAL CAMERA

OLYMPUS SP-350

RATING ★★★★★

PRICE £243 inc VAT

SUPPLIER www.pcwb.com

DETAILS www.olympus.co.uk



The Olympus SP-350 may be small enough to fit in a handbag or pocket, but its accessory hotshoe and threaded lens ring prove it's no mere point-and-click camera. It provides program, aperture priority, shutter priority and full manual controls, and histogram and exposure value (EV) readouts are there to help.

The SP-350 has excellent image quality and is extremely competitive for such a versatile camera.

SPECIFICATIONS 8 megapixels (3,264x2,448 pixels), 3x optical zoom, 25MB internal memory, xD-Picture Card slot. **Part code** 003753



HOTLIST DIGITAL CAMERA

NIKON CoolPix 5600

RATING ★★★★★

PRICE £134 inc VAT

SUPPLIER www.currys.co.uk

DETAILS www.nikon.co.uk



Nikon's CoolPix 5600 is a low-cost, no-frills camera. The lack of manual settings will put off the amateur photographer, but the point-and-click crowd will love its ease of use and excellent image quality.

The 5-megapixel sensor captures photographs in fine detail and exemplary colours in a range of conditions. Quite a bargain.

SPECIFICATIONS 5 megapixels (2,592x1,944 pixels), 3x zoom lens, 14MB internal memory and SD slot. **Part code** VAA310EO





REVIEW DIGITAL CAMERA

CANON

PowerShot S80

RATING ★★★★★

PRICE £335 inc VAT

SUPPLIER www.amazon.co.ukDETAILS www.canon.co.uk

Canon's PowerShot S80 is designed for people who want a high-performance camera that's not too big or awkwardly shaped for pockets and handbags. The lens has an unexceptional 3.6x zoom range, which helps keep the dimensions down, but its 28-100mm focal length (35mm equivalent) allows for wider-angle photography than the 35-105mm ranges of most 3x zoom lenses. This isn't an ultra-compact camera, though, and it weighs 225g. The lithium battery's 720mAh capacity is surprisingly low considering its bulk, but it still managed to give us 422 shots on a single charge.

At the back, a 2.5" LCD screen is accompanied by a generous assortment of physical controls, including dedicated ISO and manual focus buttons and one that you can assign to white balance, resolution or a range of other options. The five-way pad doubles as a wheel for adjusting the selected setting and, along with clear information onscreen, the camera is fast and satisfying to use.

There are plenty of features that remind you this is no ordinary camera. The S80 captures video at up to 1,024x768 pixels and 15fps. This is an impressive feat, although to our eyes the limited frame rate is just as noticeable as the increased resolution when compared with the more usual

movie mode of 640x480 pixels (VGA) at 30fps. Reviewing photos on the camera has an air of class about it: pictures rotate automatically depending on which way up the camera is held, the wheel facilitates quick browsing and there's even a choice of transitions. The camera readies itself for a shot reasonably quickly, taking two seconds from startup or between shots, and four seconds with the flash enabled.

The S80's manual exposure mode is one of the best we've seen, as the preview image's brightness and a histogram display react continuously to shutter speed, aperture, ISO and flash settings. These previews are extremely accurate, too, showing an exposure that closely matches the resulting picture. The only thing missing is an Exposure Value (EV) readout, although this information appears once the shutter button is half-pressed.

The 8-megapixel sensor produced stunningly sharp images that were on a par with those from Olympus's SP-350 (see Hotlist below left), but for colour accuracy the performance was more varied. Canon's automatic white balance coped better with artificial light, but the SP-350 gave much more consistent exposures and showed less image noise at higher ISO settings. In low light without the flash, the S80 invariably underexposed shots, and we had to use exposure compensation or switch to manual mode to get usable results. The flash performed well at close range, but subjects three metres away appeared gloomy. Even in daylight, some pictures were woefully underexposed, although giving the camera a second chance at a shot was usually enough to remedy the situation.



With most other things between the Canon S80 and Olympus SP-350 being equal, the Canon camera is the faster performer. However, the trade-off is less reliability from the automatic settings. As such, its performance is somewhat wasted, as it's often necessary to adjust settings or take a couple of shots to get a good picture. The Olympus SP-350 costs £80 less, too, making it a much better deal.

Ben Pitt

✓ Superb controls; capable of excellent image quality

✗ Automatic settings give unreliable results

SPECIFICATIONS 8 megapixels (3,264x2,448 pixels), 3.6x optical zoom, 32MB SD card, 720mAh li-ion battery. **Part code** 0314B007AA

HOTLIST SCANNER

EPSON

Perfection 2580 Photo

RATING ★★★★★

PRICE £88 inc VAT

SUPPLIER www.shopmagenta.comDETAILS www.epson.co.uk

The Epson 2580 Photo's lid contains an unusual motorised film feeder for loading negatives. It feels sturdy and was very quick in operation, previewing six negatives in just 31 seconds. Despite its modest optical resolution, the 2580's crisp and detailed film scans are excellent, as are its reflective scans.

SPECIFICATIONS 2,400x4,800dpi optical resolution, 48-bit colour, USB Hi-Speed. **Part code** B11B172122



HOTLIST DIGITAL CAMERA

NIKON

D50

RATING ★★★★★

PRICE £459 inc VAT

SUPPLIER www.currys.co.ukDETAILS www.nikon.co.uk

Nikon's D50 is the cheapest digital SLR camera we've reviewed. It offers great versatility and, like all SLRs, changeable lenses. The supplied lens is OK, but you'll probably want to upgrade it.

The D50 captures photos at a resolution of 3,008x2,000, and we found its shots to be rich and detailed and to exhibit a subtleness of colour that's not found in a compact camera. This camera is truly excellent value.

SPECIFICATIONS 3,008x2,000 resolution, 18-55mm lens (27-83mm 35mm equivalent), takes SD memory. **Part code** D50(UK) 18-55KIT SI



HOTLIST DIGITAL CAMERA

CANON

PowerShot A610

RATING ★★★★★

PRICE £185 inc VAT

SUPPLIER www.savastore.comDETAILS www.canon.co.uk

Canon's PowerShot A610 is fairly large, but it fits comfortably in your hand. Its picture quality is amazing, and it coped flawlessly with tricky lighting conditions such as high contrast and near darkness.

With its excellent video mode and manual focus, the A610 is better than many more expensive cameras.

SPECIFICATIONS 5 megapixels (2,592x1,944 pixels), 4x optical zoom, 32MB SD card. **Part code** 0322B007AA





REVIEW DIGITAL CAMERA

KODAK
EasyShare P850

RATING ★★★★★

PRICE £306 inc VAT

SUPPLIER www.savastore.comDETAILS www.kodak.co.uk

The Kodak EasyShare P850 is aimed at photography enthusiasts who can't stretch to the expense of a digital SLR, or who value a 12x optical zoom more than a through-the-lens optical viewfinder.

Big zooms are more susceptible to blur from camera shake, so it's good to see effective optical image stabilisation built in. We managed to take sharp handheld shots at 12x zoom with a 1/40s shutter speed, but it didn't always work well.

The plastic body seems durable and is extremely comfortable to hold. It has an accessory hotshoe and 18 buttons, wheels and dials, including controls for focus, metering and drive modes, and a switch that toggles between the 2.5" LCD screen and the 237,000-pixel electronic viewfinder. A magnified picture-in-picture makes manual focusing easier but it's slow to adjust and, despite the mass of buttons, aperture, shutter speed and ISO settings, isn't as quick to access as we'd like. The lens is slow, too, taking five seconds from power-up to extend into position. In low lighting the auto-focus can take up to three seconds, although with manual focus the gap between shots is just over a second.



A 5.1-megapixel sensor may seem under-specified in a £300 camera, but the P850's images seem sharp. In fact, close examination reveals some aggressive digital noise reduction. This works most of the time, but complex images such as brickwork had a smudged appearance. Colour accuracy was high, with vibrant tones and superb automatic exposure, though the white balance modes were often needed to fix colour casts for indoor shots.

We liked the photos produced by the P850, but Canon's PowerShot S2 IS has almost identical specifications, costs the same, is quicker to use and offers marginally better image quality.

Ben Pitt



Huge zoom range; plentiful controls



Slow operation

SPECIFICATIONS 5.1 megapixels (2,592x1,944 pixels), 12x optical zoom, 30MB internal memory, SD slot, 1,800mAh li-ion battery. Part code 8893901

REVIEW DIGITAL CAMERA

PENTAX
Optio S6

RATING ★★★★★

PRICE £220 inc VAT

SUPPLIER www.jessops.comDETAILS www.pentax.co.uk

The Optio S6 is a little camera with some big specifications. Weighing just 120g with its battery, it's the lightest camera we've ever seen. At 52mm its height isn't quite record breaking, but this is as tall as it needs to be to accommodate the whopping 2.5" LCD screen. The screen's 232,000-pixel resolution is twice that of the screens in most cameras, including other 2.5" models we've seen.

The interface that Pentax uses for its compact cameras is one of our favourites. It has the usual dedicated controls for flash, macro, self-timer and scene presets, but extra buttons swap their duties to access whichever functions you most commonly need. As a result, the camera is quick to use, and you'll rarely need to delve into the menu screens. The other options are plentiful, but there's no direct control over aperture, shutter speed or focus.

Video is recorded at 640x480 pixels and 30fps in DivX format, which provides excellent quality video in small files. The S6 can pack 22 minutes on a 512MB SD card at the maximum quality setting. We expected the MPEG Layer 2 audio format to record high-quality video soundtracks, but it was prone to distortion and clicks.



The camera includes basic video-editing tools. More useful is the ability to adjust photos after they've been taken, which is ideal if you're printing without the help of a PC. However, we found high-contrast and low-light photos needed brightening up too often. Even Night Scene, with its four-second exposure time, tended to underexpose shots. Otherwise, image quality was impressive, with natural colours and none of the sharpness issues we've seen on some Pentax cameras.

The S6's tiny design means it's very tempting, but the ultra-compact Casio EX-S500 (*What's New, Shopper* January 2006) is more appealing.

Ben Pitt



Ultra-compact design; huge screen



Disappointing images in difficult lighting conditions

SPECIFICATIONS 6 megapixels (2,816x2,112 pixels), 3x optical zoom, 23MB internal memory, SD slot, 710mAh li-ion battery. Part code 27359064

CHOOSING A...

FLATBED
SCANNER

If you're thinking of buying a flatbed scanner but wonder what features you need, look no further than our expert guide

1 A basic flatbed scanner (see specs in grey below) can produce surprisingly good scans if the mechanics and optics are up to scratch – something you can't tell without performing a test scan. The colour depth is often quoted, but this gives you no idea how faithful those colours will be, and poor focus can make a high optical resolution irrelevant. Disregard interpolated resolutions: they just blow up the scanned picture without adding any extra detail.

2 If you have a high workload, it's worth paying more for a faster scanner. The best can produce an A4 300dpi scan in 15 seconds and a preview scan – used to select a detail to scan – in around five seconds. If you have to scan a stack of paper, buy a scanner with an automatic document feeder (ADF).

3 A 300dpi scan is sharp to the human eye, but if you print it at twice the original size the final resolution is a grainy 150dpi. If you plan to print extreme enlargements you need a 1,200x2,400dpi, 2,400x2,400dpi or 2,400x4,800dpi flatbed. The mechanism and optics quality should also be increased accordingly.

4 Transparencies, such as slides and negatives, must be backlit to be scanned – look for a transparency adaptor. A 35mm film needs to be scanned at very high resolution to produce a decent-sized image. It is better to use a dedicated film scanner for such small items, as they can cope with dust and scratches automatically.

5 Beyond the standard TWAIN driver that provides compatibility with any scanner-aware software, decent image-editing and OCR software is useful.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

SCANNING AREA: A4

OPTICAL RESOLUTION: 600x1,200dpi

INTERFACE: USB Hi-Speed

SOFTWARE: TWAIN driver